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Patent Application
Docket Number: EMC-00-067

Applicant: Wright et al. EMC CONFIDENTIAL

What is claimed is:

1. A method for managing data that may be replicated across one or more computer

systems, the method comprising the computer-executed steps of:

establishing one or more mirrored copies of data that are copies of one or more volumes

of data that are part of a first volume group on a first computer system having a first

operating system;

separating the one or more mirrored copies of data from the respective one more volumes

of data;

discovering logical information related to the one or more volumes of data that are part of

the volume group on the first computer system and creating a map of the logical

information to physical devices on the first computer system; and

mounting a duplicate of the one or more mirrored copies of data on a second computer

system having a second operating system using the map to create a second volume group

that is substantially identical to the first volume group.

2. The method of claim 1, wherein the first and second operating system are

substantially the same and are selected from a group consisting of IBM AIX, Sun Solaris,

or HP UX, and the computer-executed steps may be performed substantially independent

of which operating system is selected from the group.

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4. The method of claim 3, wherein the tree structure is converted back into a map that is

information.

sent to a second computer system having a second operating system.

5. The method of claim 4, including the step of building a second volume group on the

second computing system that is a substantially a copy of the first volume group on the

first computing system.

6. The method of claim 5, including the step of mounting the separated one or more

copies of data on the first or second computer system using the second volume group.

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8. The method of claim 6, including the step of:

dismounting the separated one or more copies from the second computer system.

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9. The method of claim 1, including the step of:

backing up the separated one or more copies of data to a backup medium.

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7. The method of claim 6, wherein the first and second computer system are combined.

3. The method of claim 2, wherein the map is configured as a flat file that is converted

into a tree structure and including the step of using the tree structure to verify the

accuracy of the information related to the volume group and the other logical

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10. The method of claim 9, including the step of:

restoring one or more volumes of data from the backup medium or from the one or more

mirrored copies of data that are copies of the one or more volumes of data.

11. The method of claim 1, wherein the respective one or more volumes of data that are

part of a volume group on the first computer system are further associated with a first

software application.

12. The method of claim 11, wherein a second software application is provided on the

second computer system and the separated one or more copies of data on the second

computer system are associated with the second software application.

13. The method of claim 12, including the step of:

backing up the separated one or more copies of data to a backup medium.

14. The method of claim 13, wherein the second software application has an associated

database and the step of backing up the separated one or more copies of data to a backup

medium includes backing up the associated database.

15. The method of claim 14, wherein there is a set of information associated with the

database, the set of management data including tablespaces, archive logs, redo logs, and

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control files and at least some of the set of information associated with the database is backed up to the backup medium during the backup step.

- 16. The method of claim 15, including the step of:
- restoring from the separated one or more copies of data the respective one or more volumes of data associated with the separated one or more copies of data from the separated one or more copies of data, and wherein at least some of the set of information associated with the database is used during this step.
 - 17. A computer system comprising:
 - a data storage system including a plurality of storage devices;
 - a first and second computer system in communication with the data storage system; and

computer-executable logic that enables the method steps of:

establishing one or more mirrored copies of data that are copies of one or more volumes of data that are part of a first volume group on a first computer system having a first operating system;

separating the one or more mirrored copies of data from the respective one more volumes of data;

discovering logical information related to the one or more volumes of data that are part of the volume group on the first computer system and creating a map of the logical information to physical devices on the first computer system; and 5

mounting a duplicate of the one or more mirrored copies of data on a second computer system having a second operating system using the map to create a second volume group that is substantially identical to the first volume

group.

18. The system of claim 17, wherein the first and second operating system are

substantially the same and are selected from a group consisting of IBM AIX, Sun Solaris,

or HP UX, and the computer-executed steps may be performed substantially independent

of which operating system is selected from the group.

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19. The system of claim 18, wherein the map is configured as a flat file that is converted

into a tree structure and including the step of using the tree structure to verify the

accuracy of the information related to the volume group and the other logical

information.

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20. The system of claim 19, wherein the tree structure is converted back into a map that

is sent to a second computer system having a second operating system.

21. The system of claim 20, including the step of building a second volume group on the

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second computing system that is a substantially a copy of the first volume group on the

first computing system.

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- 22. The system of claim 21, including the step of mounting the separated one or more copies of data on the first or second computer system using the second volume group.
- 23. The system of claim 22, wherein the first and second computer system arecombined.
 - 24. The system of claim 22, including the step of: dismounting the separated one or more copies from the second computer system.
 - 25. The system of claim 17, including the step of: backing up the separated one or more copies of data to a backup medium.
 - 26. The system of claim 25, including the step of: restoring one or more volumes of data from the backup medium or from the one or more mirrored copies of data that are copies of the one or more volumes of data.
 - 27. A program product for use with a data storage system having a plurality of storage devices and which is in communication a first and second computer system, the program product being for management of data and being comprised of:
- computer-executable logic contained on a computer-readable medium and which is configured for causing the following computer-executed steps to occur:

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establishing one or more mirrored copies of data that are copies of one or more volumes of data that are part of a first volume group on a first computer system having a first operating system;

separating the one or more mirrored copies of data from the respective one more volumes of data;

discovering logical information related to the one or more volumes of data that are part of the volume group on the first computer system and creating a map of the logical information to physical devices on the first computer system; and

mounting a duplicate of the one or more mirrored copies of data on a second computer system having a second operating system using the map to create a second volume group that is substantially identical to the first volume group.